

Adrien carries now his prothesis longer he has retied social links.

Purpura gives not only hurts of ischemia requiring amputations in the acute phase of the disease, but also involvement of the growth plates, more or less important but sometimes up to a complete sterilization of the whole growth plate. This raises the later problem after the acute phase of axis deviation and disparity of limbs length.

So, the frequency of the involvement of the growth plate must no be underestimated. Children require multidisciplinary consultations bringing in the occupational therapists, the physiotherapists, and the doctors of physical medicine, orthopedic surgeons.

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P034-e

In vivo measurement of compression bandage interface pressures: Evaluation of different bandages, application methods and positions

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Keywords: Interface pressure; Compression bandages; Compression stockings; Application method; Reproducibility

Background.— A compression bandage has precise technical characteristics (structure, stretch, tension). But no standard exists for calculating the in vitro pressure exerted by a bandage. In addition, the in vivo pressures exerted on the skin by a compression bandage are still little understood.

Objective.— To perform in vivo measurement of the pressure of different compression bandages with different technical characteristics (elastic and non-elastic) and using different application methods and subject positions.

Methods.— The pressures were measured on the right legs of 20 healthy females at three different points on the leg (B1, C and F) using six types of compression devices (stockings, non-elastic bandage, elastic bandages with two different technical characteristics and three different application methods), and in three positions (supine, sitting, standing).

Results.— All the elastic compression bandages respect the principle of graduated pressure along the length of the limb ($P < 0.0001$), but not for non-elastic bandage whose pressure did not differ between B1 and C (−22% and −46% for Biflex[®] elastic bandages vs −1% and −39% for the non-elastic band, respectively at C and F relative to B1).

The pressures of all the bandages increase significantly ($P < 0.0001$) between the supine position and the sitting or standing position, especially with the non-elastic compression bandage (+4 mmHg and +5 mmHg for Biflex[®] elastic bandages using the spiral technique vs +8 mmHg and +12 mmHg for non-elastic bandage, respectively in B1 and C).

There is a marked variation in pressures between subjects for the non-elastic bandage (16% and 18% for the non-elastic bandage vs 8% and 12% for Biflex[®] elastic bandages using the spiral technique, respectively in B1 and C).

The pressure increases significantly with the number of bandage overlaps, along with the tension of the bandage on application ($P < 0.01$).

Conclusion.— The pressure exerted depends on the application method and the technical characteristics of the bandage. The elastic and non-elastic bandages behave differently from one another, with the non-elastic bandages not appearing to comply with the medical recommendations concerning graduated pressure. In addition, there is a high level of variability between subjects for some compression bandages (non-elastic and elastic applied using the spica method). However, the reproducibility of application to the same subject is good when the tester is well qualified.

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P035-e

Mycetoma or Madura foot: A case report

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Keywords: Mycetoma; Madura foot; Diagnosis; Treatment; Amputation

Introduction.— Mycetoma or Madura foot is a chronic skin infection due to bacterial or fungal pathogens. It is endemic in tropical countries, but rare in temperate climates. It is known by its elective podal location. Untreated, the disease progresses to destruction of soft tissue and adjacent bone structures with deformation of the limb.

The nature of this condition is illustrated by reference to a recent observation in our service and a brief discussion of some important diagnostic and therapeutic.

Observation.— It is 23-years-old man, consulted for a painful foot, with the presence of nodules progressing for 5 years, occurred in the aftermath of an injury to the left foot arch. Radiography of the foot shows an anterior tarsal and mediotarsal osteolysis. Bone biopsy reveals the presence of *Madurella mycetomatis*, covered by a radical surgical treatment type of amputation of the leg. A tibial prosthesis was performed with recovery of independence of the march.

Discussion.— These are inflammatory pseudo-tumors with multiple fistulas of slow evolution containing fungal grains or actinomycotic of exogenous origin. They grow in soft tissues under the skin and can reach the bone, making the gravity. Diagnosis of mycetoma should be considered in chronic skin swelling, painless, fistulas, draining grains. Modern imaging, although non-specific, can guide the diagnosis and assess the extension. The treatment is medical and surgical. The recurrence rate remains high (50%).

Conclusion.— Mycetoma should be thought about in differential diagnoses in a chronically swollen and painful foot to avoid, as shown in our case report, a delayed diagnosis leading to functional and esthetical impairments

Further reading

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P036-e

The effects of different sudden ankle inversion degrees on ankle brace efficacy

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Keywords: Ankle brace; Ankle inversion; Tilting platform; Ankle sprain

Objective.— This study was designed to test different inversion angles during a sudden induced inversion movement with brace or no-brace conditions.

Methods.— Twelve healthy subjects, without any recent ankle injuries participated in this study. A custom-built tilting platform was made and induced to the ankle an inversion movement looked like a real injury movement. Two conditions were measured barefoot: brace and no-brace conditions. The calcaneal inversion angle was measured by video at three different angles of tilt (18,9°, 25° et 29,8°) induced by the tilting platform

Results/discussion.— The tested ankle brace reduced significantly the calcaneal inversion angle compared to the no-brace condition.

For the no-brace condition, the increase of tilting platform angle induced a significant increase of calcaneal inversion angle.

When subjects wore braces, it seems to be less sensitive to angle effect until 25°, then it seems to increase over that value. Finally, the decrease of mobility or percentage reduction depended on the angle of tilt from tilting platform.

Conclusion.— This experimental study including the tilting platform enables to test the restriction of inversion motion induced by the brace. Significant differences between brace and no-brace conditions at different angles were

